CLAIM AMENDMENTS

1.   (Currently Amended) A method comprising:

basing a discrete frequency transformation on the number of subcarriers in a predetermined set of subcarriers, one or more subcarriers of the set assigned to modulate data and the remaining subcarriers of the set not assigned to modulate the data;

performing the discrete frequency transformation on the data to modulate the data; and

excluding from the transformation mathematical operations associated with the subcarriers not assigned to modulate the data; and

selectively pre-rotating phases of said one or more subcarriers to generate a cyclic prefix.

2.   (Original) The method of claim 1, wherein the excluding comprises:

excluding all of the subcarriers not assigned to modulate the data.

3.   (Original) The method of claim 1, wherein the performing the discrete frequency transformation comprises:

performing orthogonal frequency division multiplexing modulation on the data.

4.   (Original) The method of claim 1, wherein the performing comprises:

applying a weighting function during the discrete frequency transformation to perform symbol shaping.

5.   (Original) The method of claim 1, wherein said one or more subcarriers are assigned to at least one of a user, an electrical device and a terminal.

6.   (Original) The method of claim 1, further comprising:

using the modulated data to form an orthogonal frequency division multiplexing symbol.

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7.   (Original) The method of claim 1, further comprising:

using the transformation to generate symbols at a rate defined by a symbol generation interval;

basing the discrete frequency transformation on the symbol generation interval; and

using the discrete frequency transformation to generate discrete modulated values for an interval that exceeds the symbol generation interval to generate a cyclic extension.

8.   (Original) The method of claim 7, further comprising:

transmitting each of the symbols during one of the intervals that exceeds the symbol generation interval.

9.   (Cancelled)

10.   (Original) The method of claim 1, wherein the mathematical operations comprise at least one of an accumulate operation and a multiplication operation.

11.   (Currently Amended) A system comprising:

a device to generate data to be modulated; and

a transmitter to:

base a discrete frequency transformation on the number of subcarriers in a predetermined set of subcarriers, one or more subcarriers of the set of subcarriers assigned to modulate data and the remaining subcarriers of the set not assigned to modulate the data;

perform the discrete frequency transformation on the data to modulate the data; ~~and~~

exclude from the transformation mathematical operations associated with the subcarriers not assigned to modulate the data; and

selectively pre-rotate phases of said one or more subcarriers to generate a cyclic prefix.

12.   (Original) The system of claim 11, wherein the transmitter excludes all of the subcarriers not assigned to modulate the data.

13.   (Original) The system of claim 11, wherein the transmitter performs orthogonal frequency division multiplexing modulation on the data.

14.   (Original) The system of claim 11, wherein the transmitter determines components of the discrete frequency transformation independently from each other.

15.   (Original) The system of claim 11, wherein said one or more subcarriers are assigned to one of a user, an electrical device and a terminal.

16.   (Original) The system of claim 11, wherein the transmitter uses the modulated data to form an orthogonal frequency division multiplexing symbol.

17.   (Original) The system of claim 11, wherein the transmitter:

uses the transformation to generate symbols at a rate defined by a symbol generation interval;

bases the discrete frequency transformation on the symbol generation interval; and

uses the discrete frequency transformation to generate discrete modulated values for an interval that exceeds the symbol generation interval to generate a cyclic extension.

18.   (Currently Amended) The system of claim ~~11~~ 17, wherein the transmitter transmits each of the symbols during one of the intervals that exceeds the symbol generation interval.

19.   (Cancelled)

20.   (Original) The system of claim 11, wherein the mathematical operations comprise at least one of an accumulate operation and a multiplication operation.

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21.   (Currently Amended) An article comprising a storage medium readable by a processor-based system, the storage medium storing instructions to cause a processor to:

base a discrete frequency transformation on the number of subcarriers in a predetermined set of subcarriers, one or more subcarriers of the set assigned to modulate data and the remaining subcarriers not assigned to modulate the data;

perform the discrete frequency transformation on the data to modulate the data; ~~and~~

exclude from the transformation mathematical operations associated with the subcarriers not assigned to modulate the data; and

selectively pre-rotate phases of said one or more subcarriers to generate a cyclic prefix.

22.   (Original) The article of claim 21, the storage medium storing instructions to cause the processor to exclude from the transformation all mathematical operations associated with the subcarriers not assigned to modulate the data.

23.   (Original) The article of claim 21, the storage medium storing instructions to cause the processor to perform orthogonal frequency division multiplexing modulation on the data.

24.   (Currently Amended) The article of claim 21, the storage medium storing instructions to cause the processor to determine components of the ~~inverse~~ discrete frequency transformation independently from each other.

25.   (Original) The article of claim 21, wherein said one or more subcarriers are assigned to one of a user, an electrical device and a terminal.

26.   (Original) The article of claim 21, the storage medium storing instructions to cause the processor to use the modulated data to form an orthogonal frequency division multiplexing symbol.

27.   (Original) The article of claim 21, the storage medium storing instructions to cause the processor to:

use the transformation to generate symbols at a rate defined by a symbol generation interval;

base the discrete frequency transformation on the symbol generation interval; and

use the discrete frequency transformation to generate discrete modulated values for an interval that exceeds the symbol generation interval to generate a cyclic extension.

28.   (Original) The article of claim 27, the storage medium storing instructions to cause the processor to:

transmit each of the symbols during one of the intervals that exceeds the symbol generation interval.

29.   (Cancelled)

30.   (Original) The article of claim 21, wherein the mathematical operations comprise at least one of an accumulate operation and a multiplication operation.